

## Dehydration and Acid Reduction Startup

### Potential Hazards:

Hot Product in the system

### Precautions to take:

Proper PPE, Safety Glasses and gloves

Aware of the location of the eyewash station and shower

Use caution when opening drains or sample ports

### Safety systems in place:

Pressure Relief valves in place

Alarms in place for high and low pressures and temperatures

1. Vacuum System Startup
2. Ensure Distillation System start up is in progress
3. Confirm Mole Sieve Bed control valves are closed and that the sequence has been stopped
4. Confirm Mole Sieve Bed temperature is greater than 200° F
5. Confirm Regen Receiver has a 30% liquid level in it.
6. Open to 25% V-43159 Regen Pump discharge valve
7. Start PC-4303 Regen Pump, verifying the correct pump operation
8. Slowly open V-43159 Regen pump discharge valve.
9. Place LV-43145 Regen Preheater outlet level valve in AUTO with a set point of 50% at LIC-43145, Regen Receiver level control indicator.
10. Place PV-43102A and PV-43102B, Mole Sieve Bed alcohol inlet pressure valves in AUTO with a set point of 22.5 psia.
11. Place PV-43140, Mole Sieve back pressure control valve in AUTO with a set point of 20.5 psia at PIC-43140 Mole Sieve back pressure controller located at Acid Reduction Column inlet
12. Confirm Mole Sieve bed operating parameters are correct in the DCS
13. Start Mole Sieve Bed sequence from the DCS screen
14. Place TV-44117 Product Condenser cooling water temperature valve in AUTO with a set point of 105° F at TIC-44117, Product Condenser temperature indicator controller
15. Place PV-44108 Product Condenser vapor outlet pressure control valve in AUTO with a set point of 9 psia at PIC-44108, Acid reduction column pressure indicator controller

16. When Rectifier Column Pressure is over 22.5 psia. This will start vapor flow to the Mole Sieve Beds
17. Slowly Open TV-43106 Superheater temperature control valve, to approximately 10% to start steam flow to the Superheater.
18. Ensure TR-4301 Superheater steam trap is operating correctly
19. Place TV-43106 Superheater steam inlet temperature valve in AUTO with a set point of 240° F at TIC-43106 Superheater temperature indicator controller.
20. Place LV-44101 Acid Reduction Column seal leg level control valve in AUTO with a set point of 50% at LIC-44101 Acid Reduction Column seal leg level indicator controller
21. Place LV-44110 Acid Reduction level control valve, in AUTO with a set point of 50% at LIC-44110 Acid Reduction level controller.